



As a steward of our nation's coastal and marine environments, NOAA addresses immediate and long-term environmental threats through its Office of Response and Restoration (OR&R). Scientists are on call around-the-clock to provide the U.S. Coast Guard and other emergency responders with critical information to help minimize environmental damage caused by oil and hazardous chemical spills. Environmental experts assess ecosystems compromised by historic or ongoing contamination and work with other organizations to conduct remediation, restoration, and monitoring of critical natural resources.

Protecting and Restoring Michigan's Coastal and Marine Areas

NOAA trust resources in Michigan include the Great Lakes, a premier national aquatic resource containing approximately 90% of the U.S. supply of fresh water. Coastal areas and wetlands support numerous salmon, trout, and eel fisheries. Contamination by hazardous substances and invasive species threaten the Great Lakes' ecosystems and impede safe transportation along hundreds of miles of navigable waters. The state map on the reverse page shows key response and restoration activities in the past year.



Tug Seneca aground in Lake Superior, 2006

Emergency Response

During a storm in December 2006, the tug *Seneca*, carrying 1,900 gallons of diesel fuel and 50 gallons of lubricating oil, grounded in three feet of water approximately 21 miles off Grand Marias in Lake Superior. The grounding occurred near a critical habitat of the piping plover bird, an endangered species. NOAA provided scientific assistance, including weather and trajectory information, to minimize damage if any oil was released into the environment.



Cannelton Superfund site in Sault Ste. Marie, Michigan

Assessment and Restoration

The Cannelton Industries Superfund site, approximately one and half miles west of downtown Sault Sainte Marie and in the 100-year floodplain of the St. Mary's River, is extensively contaminated by tannery wastes. Soils, river sediments, and groundwater contain extremely high levels of chromium, lead, and other toxic metals. NOAA worked with the U.S. Environmental Protection Agency to mitigate the contamination and develop a long-term biological monitoring program to ensure the success of these recovery measures.

Research

NOAA collaborates with other federal, state, and local programs to develop innovative approaches to protecting marine and estuarine environments through research and synthesis of information. The Coastal Response Research Center (CRRC) brings together the resources of a research-oriented university and the field expertise of OR&R to conduct and oversee basic and applied research, conduct outreach, and encourage strategic partnerships in spill response, assessment, and restoration.



NOAA's Office of Response and Restoration—Protecting our Coastal Environment

**For further information about NOAA's Office of Response and Restoration,
 please call (301) 713-2989 or visit our Web site at
response.restoration.noaa.gov**

Banner photo courtesy of Michigan Sea Grant, Kurt Byers

